

REMARKS

Summary of the Office Action

The specification is objected to.

Claims 3, 4, 7 and 14-18 are objected to.

Claims 1, 2, 5-7, 14-16, 19, 22 and 24-28 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,625,410 to Sato et al. (“Sato”).

Claims 1, 2, 7, 14, 15, 19, 22 and 24-28 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,445,900 to Fukao et al. (“Fukao”).

Claims 3, 4, 8, 11-13, 17, 18, 20, 21 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of U.S. Patent No. 5,585,598 to Kasahara et al. (“Kasahara”).

Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of U.S. Patent No. 6,072,976 to Kuriyama et al. (“Kuriyama”) and U.S. Patent No. 6,760,564 to Oohara et al. (“Oohara”).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara, and in further view of Kuriyama.

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara and Kuriyama, and further in view of Oohara.

Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kuriyama.

Summary of the Response to the Office Action

Applicants have amended the specification.

Applicants have amended claims 1, 3, 4, 7, 14, 17, 19, 21 and 26.

Applicants have canceled claim 20 without prejudice or disclaimer.

Claims 1-19 and 21-28 are pending.

All Claims Define Allowable Subject Matter

The specification, and claims 3, 4, 7 and 14-18 are objected to. Applicants have amended the specification and claims to address the Examiner's helpful suggestions described at paragraphs 1 and 2 of the Office Action. Withdrawal of the objections to the specification and claims 3, 4, 7 and 14-18 is respectfully requested.

Claims 1, 2 and 5-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sato. Applicants respectfully traverse the rejection under 35 U.S.C. § 102(b). Applicants have amended claim 1 to particularly point out and distinctly claim the invention. Claim 1 recites an image forming apparatus including a first contacting unit, an image carrier, and a second contacting unit. The first contacting unit includes a positioning member which is contacted with respect to the image carrier along a predetermined weight direction. The second contacting unit is contacted with respect to the image carrier in a wrap shape. The predetermined weight direction by the first contacting unit is intersected with the wrap-shaped contact range by the second contacting unit. Thus, the invention provides for example, a positioning member such as a tracking roller 52 that counteracts against the force of a second contacting unit such as an

intermediate transfer belt 15, so that a photosensitive drum 11 does not have a rotational eccentricity while a plurality of developing rollers 51 transport toner to the photosensitive drum 11. Regarding the developing rollers 51, it is noted that the developing rollers do not counteract against the force of intermediate transfer belt 15 in any meaningful way. Rather, the developing rollers 51 include a magnetic brush on the surface of the developing roller. The tip of the magnetic brush contacts the photosensitive drum 11 to transport the toner to the surface of the photosensitive drum 11. Thus, the developing rollers 51 are not positioning members. Support for these features is provided at, for example, page 25, ll. 9-11; page 26, ll. 13-16; page 28, ll. 3-5 and ll. 17-24; page 26, line 18- page 27, line 6; and Figs. 2, 3A and 3B.

As shown in Fig. 2 and described at col. 6, ll. 17-27 of Sato, a rotary developing unit 13 has developing devices 13a to 13d, which are rotatably mounted thereon and contain the color component toners. The developing devices 13a to 13d attach each color component toner to a portion on the photosensitive drum 10. The toner particles are attracted to the electrostatic latent image on the photosensitive drum 10. Developing devices 13a to 13d merely attach toner to the photosensitive drum 10. Developing devices 13a to 13d do not position photosensitive drum 10, so developing devices 13a to 13d are not positioning members. Accordingly, Applicants submit that Sato does not teach a first contacting unit that includes a positioning member which is contacted with respect to the image carrier along a predetermined weight direction, as recited in claim 1. Claims 2 and 5-7 depend from claim 1 and recite the same combination of allowable features recited in claim 1, as well as additional features that define over the prior art.

Accordingly, it is requested that the rejection under 35 U.S.C. § 102(b), of claims 1, 2 and 5-7, be withdrawn. It is noted that Sato can only qualify as prior art under 35 U.S.C. § 102(e), rather

than 35 U.S.C. § 102(b). Accordingly, any rejection under 35 U.S.C. § 103 by Sato would be improper in consideration of the common assignee provisions of 35 U.S.C. § 103(c).

Claims 1, 2 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fukao. As shown in Fig. 2 and described at col. 3, line 58 – col. 4, line 6 of Fukao, a revolver type development unit 400 includes developing devices 401-404. Each of the developing devices 401 to 404 includes a developing sleeve as a developing material carrier which allows a nap of a developing material to be brought into contact with the surface of the photosensitive drum 100. Developing devices 401-404 merely attach toner to the photosensitive drum 100. Developing devices 401-404 do not position photosensitive drum 100, so developing devices 401-404 are not positioning members. Accordingly, Applicants submit that Fukao does not teach a first contacting unit that includes a positioning member which is contacted with respect to the image carrier along a predetermined weight direction, as recited in claim 1.

Moreover, any contact between the developing devices 401-404 of Fukao and photosensitive drum 100 is necessarily in a direction that is normal to the surface of photosensitive drum 100. An extension of such a normal direction does not intersect the wrap-shaped contact of intermediate transfer belt 501 with the photosensitive drum 100. Accordingly, Applicants submit that Fukao does not teach a predetermined weight direction by the first contacting unit is intersected with the wrap-shaped contact range by the second contacting unit, as recited in claim 1. Claims 2 and 7 depend from claim 1 and recite the same combination of allowable features recited in claim 1, as well as additional features that define over the prior art. Accordingly, it is requested that the rejection under 35 U.S.C. § 102(b), of claims 1, 2 and 7, be withdrawn.

Claims 3 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara. Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kuriyama and Oohara. Applicants respectfully traverse the rejections under 35 U.S.C. § 103(a). Claims 3-6 depend from claim 1 and recite the same combination of allowable features recited in claim 1, as well as additional features that define over the prior art. Applicants submit that neither Kasahara, Kuriyama, nor Oohara, overcome the above-described deficiencies of Fukao. Accordingly, it is requested that the rejections under 35 U.S.C. § 103(a), of claims 3-6, be withdrawn.

Claims 8 and 11-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara, and in further view of Kuriyama. Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara and Kuriyama, and further in view of Oohara. Applicants respectfully traverse the rejections under 35 U.S.C. § 103(a), of claims 8-13. Claim 8 recites an image forming apparatus including a developing device having a positioning member which abuts against an image carrier, and a weight direction by the positioning member to the image carrier is located within an abutting range between an intermediate transfer member and the image carrier. Claims 9-13 depend from claim 8 and recite the same combination of allowable features recited in claim 8, as well as additional features that define over the prior art. As described above, neither Fukao, Kasahara, Kuriyama, nor Oohara teach or suggest a positioning member, as recited in claims 8-13. Accordingly, it is requested that the rejections under 35 U.S.C. § 103(a), of claims 8-13, be withdrawn.

Claims 14-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sato.

Claims 14 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fukao. Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kuriyama.

Claims 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara. Applicants respectfully traverse the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a). Applicants have amended claim 14 to particularly point out and distinctly claim the invention. Claim 14 recites an image forming apparatus including a developing device being contacted to an image carrier by a positioning member in predetermined weight. A weight direction of the positioning member with respect to the image carrier is a substantially straight line that connects a contact point of an intermediate transfer member to the image carrier to a center of the image carrier. Claims 15-18 depend from claim 14 and recite the same combination of allowable features recited in claim 14, as well as additional features that define over the prior art. As described above, neither Sato, Fukao, Kasahara, nor Kuriyama teach or suggest a positioning member, as recited in claims 14-18. Accordingly, it is requested that the rejections under 35 U.S.C. § 102(b), of claims 14-16, and the rejections under 35 U.S.C. § 103(a), of claims 16-18, be withdrawn.

Claim 19 is rejected under 35 U.S.C. § 102(b) as being anticipated by Sato. Claim 19 is rejected under 35 U.S.C. § 102(b) as being anticipated by Fukao. Claims 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara. Applicants respectfully traverse the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a). Applicants have amended claim 19 to particularly point out and distinctly claim the invention. Claim 19 recites an image forming apparatus including an image carrier, a developing unit having a

plurality of developing rollers, and a transferring unit which abuts against the image carrier in a wrap shape. An extension of a line which connects a center of the image carrier to a center of a developing roller is positioned within a range where the transferring unit abuts against the image carrier in the wrap shape. The developing unit employs a member capable of maintaining an interval between the developing roller and the image carrier in a constant value in correspondence with each of the developing rollers. Claims 20-21 depend from claim 19 and recite the same combination of allowable features recited in claim 19, as well as additional features that define over the prior art. As described above, neither Sato, Fukao, nor Kasahara teach or suggest a developing unit, extension of a line, and an interval maintaining member, as recited in claims 19-21. Accordingly, it is requested that the rejections under 35 U.S.C. § 102(b), of claim 19, and the rejection under 35 U.S.C. § 103(a), of claims 20 and 21, be withdrawn.

Claims 22 and 24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sato. Claims 22 and 24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fukao. Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukao in view of Kasahara. Applicants respectfully traverse the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a). Claim 22 recites an image forming apparatus including an image carrier, a developing unit having a plurality of developing agent carriers, and a transferring unit which abuts against the image carrier in a wrap shape. When a desirable developing agent carrier is pivotally rotated to the developing position, a predetermined member abuts against the image carrier, and a direction along which the predetermined member depresses the image carrier is located within a range where the transferring unit abuts against the image carrier in the wrap shape. Claims 23-24 depend from claim 22 and recite the same combination of allowable features recited in claim 22,

as well as additional features that define over the prior art. As described above, neither Sato, Fukao, nor Kasahara teach or suggest a predetermined member abuts against the image carrier, and a direction along which the predetermined member depresses the image carrier is located within a range where the transferring unit abuts against the image carrier in the wrap shape, as recited in claims 22-24. Accordingly, it is requested that the rejections under 35 U.S.C. § 102(b), of claims 22 and 24, and the rejection under 35 U.S.C. § 103(a), of claim 23, be withdrawn.

Claim 25 is rejected under 35 U.S.C. § 102(b) as being anticipated by Sato. Claim 25 is rejected under 35 U.S.C. § 102(b) as being anticipated by Fukao. Applicants respectfully traverse the rejections under 35 U.S.C. § 102(b). Claim 25 recites an image forming apparatus including an image carrier, a developing unit having a plurality of developing agent carriers, and a transferring unit which abuts against the image carrier in a wrap shape. When a desirable developing agent carrier is separated from the developing position, a predetermined member is separated from the image carrier, and a direction along which the predetermined member depresses the image carrier is located within a range where the transferring unit abuts against the image carrier in the wrap shape. As described above, neither Sato nor Fukao teach a direction along which a predetermined member depresses the image carrier is located within a range where the transferring unit abuts against the image carrier in the wrap shape, as recited in claim 25. Accordingly, it is requested that the rejections under 35 U.S.C. § 102(b), of claim 25, be withdrawn.

Claims 26-28 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sato. Claims 26-28 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fukao. Applicants respectfully traverse the rejections under 35 U.S.C. § 102(b). Applicants have amended claim 26

to particularly point out and distinctly claim the invention. Claim 26 recites a method of holding an image carrier, including abutting a positioning member with respect to a pivotally rotated image carrier along a predetermined direction so as to depress the image carrier. Claims 27-28 depend from claim 26 and recite the same combination of allowable features recited in claim 26, as well as additional features that define over the prior art. As described above, neither Sato nor Fukao teach a positioning member, as recited in claim 26. Accordingly, it is requested that the rejections under 35 U.S.C. § 102(b), of claims 26-28, be withdrawn.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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